

**REMARKS**

Claims 1-12 and 14-24 are pending in the application.

Claims 1-12 and 14-24 have been rejected.

Claims 21-23 have been amended.

Claim 24 has been canceled, without prejudice.

Reconsideration of the Claims is respectfully requested.

I. **REJECTIONS UNDER 35 U.S.C. § 103**

Claims 1, 4-6 and 9-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sharman (US 5,744,854) in view of Hata, et al. (US 5,878,393) and “New Riverside University Dictionary” (“DIC”).

Claims 2-3 and 21-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sharman (US 5,744,854) in view of Hata, et al. (US 5,878,393) and DIC, and further in view of Oh (US 6,141,642).

Claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Sharman (US 5,744,854) in view of Hata, et al. (US 5,878,393) and DIC, and further in view of Microsoft Press, “Computer Dictionary”, page 298 (“R1”).

Claim 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Sharman (US 5,744,854) in view of Hata, et al. (US 5,878,393) and DIC, and R1, and further in view of O'Donnell (“Programming For The World - A Guide To Internationalization”, ISBN 0-13-

722190-8). ) Microsoft Press, "Computer Dictionary", page 298 ("R1").

Claims 14-15 and 19-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sharman (US 5,744,854) in view of Hata, et al. (US 5,878,393) and DIC, and further in view of Malsheen, et al (US 4,979,216).

Claims 16 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sharman (US 5,744,854) in view of Hata, et al. (US 5,878,393) and DIC and R1, and further in view of Oh (US 6,141,642).

Claim 17 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Sharman (US 5,744,854) in view of Hata, et al. (US 5,878,393) and DIC, and R1, and O'Donnell ("Programming For The World - A Guide To Internationalization", ISBN 0-13-722190-8), and further in view of Oh (US 6,141,642).

The rejections are respectfully traversed.

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. MPEP § 2142; *In re Fritch*, 972 F.2d 1260, 1262, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992). The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention is always upon the Patent Office. MPEP § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984). Only when a *prima facie* case of obviousness is established does the burden shift to the applicant to produce evidence of nonobviousness. MPEP § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444

(Fed. Cir. 1992); *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993).

If the Patent Office does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of a patent. *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Grabiak*, 769 F.2d 729, 733, 226 U.S.P.Q. 870, 873 (Fed. Cir. 1985).

A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. *In re Bell*, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. MPEP § 2142.

a. Claims 1, 4-6 and 9-12

In general terms, Sharman recites breaking down words into syllables (using a dictionary look-up of the word to determine the syllables), and then, breaking down the syllabified word into constituent phonemes (once again, using a dictionary-lookup of the syllable to find the phonemes). After the constituent phonemes have been determined, the acoustic processor

determines diphones from the constituent phonemes, and looks at a diphone library (with prerecorded speech samples associated to the diphones) to determine the corresponding speech samples which are then concatenated. See, generally, Col. 5, line 18-40; Col. 6, lines 22-38. Therefore, Sharman parses the text file down to constituent phonemes, and then matches the phonemes to diphones in a diphone library to find associated speech samples. The speech samples of Sharman are prerecorded speech segments associated with diphones.

Applicant respectfully submits that the Office Action mischaracterizes the disclosure of Sharman. Sharman fails to disclose (1) a list of textual units where the textual units in the list comprise words, prefixes and suffixes, and (2) a memory that comprises a vocabulary of words, prefixes and suffixes and a plurality of speech samples with each speech sample corresponding to a one of the words, prefixes and suffixes.

Hata, uses only whole words or phonemes without reference to prefixes and suffixes (or root words). See, Col. 5, lines 64-65 (“Whether to store entire words or individual phonemes . . .”).

In sum, Sharman recites breaking down the text into phonemes and forming diphones and utilizing the speech sample corresponding to the determined diphones – Sharman stores speech samples for diphones. Hata, in contrast, recites speech samples for phonemes or entire words. Neither reference discloses speech samples for words, prefixes and suffixes.<sup>1</sup>

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<sup>1</sup> Even though Sharman recites removal of prefixes and suffixes, this is simply to determine whether the leftover text portion is related to one that is in the dictionary so it “can be disaggregated into syllables in an analogous manner” Col. 5, lines 26-29. Therefore, Sharman continues to disaggregate into syllables, and then into phonemes, and its speech

Parsing the text in the manner described by Applicant, and which is different than that described in Hata (whole words), reduces the number of textual units and associated speech samples that the system needs. As described in the specification (page 6), a pre-defined vocabulary of about 2300 words (in one example) were found experimentally relevant in an analysis of a large volume of email messages. By utilizing prefixes and suffixes, the number of combinations is increased, while still utilizing a manageable number of root words, prefixes and suffixes. Moreover, parsing each textual input (text file and/or word) into phonemes and diphones (smaller units), such as done in Sharman (and contemplated by Hata as phonemes), significantly increases processing requirements to perform the text to speech conversion process. Applicant's invention utilizes pre-recorded speech samples associated with textual units larger than phonemes (unlike Sharman and Hata), and further utilizes prefixes and suffixes (unlike Hata).

In addition, neither Sharman or Hata disclose, teach or suggest locating an associated speech sample in memory, where the memory comprises a vocabulary of words, prefixes and suffixes and a plurality of speech samples with each speech sample corresponding to a one of said words, prefixes and suffixes (See, independent Claims 1, 9-12 and 14).

The Office Action reference to the existence of a dictionary (DIC) and how a dictionary uses the first letter in the word to order the words is simply irrelevant, and does not provide any motivation, suggestion or teaching to parse text words in a text-to-speech conversion system

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samples are still diphone related units - and not the larger speech sample units like Applicant's speech sample units for words, suffixes and prefixes.

into only prefixes and suffixes and root words, and then look-up speech samples associated with those root words, prefixes and suffixes.

b. Claims 2-3 and 21-24

With respect to dependent Claims 2-3, since neither Sharman or Hata disclose, teach or suggest a list of textual units where the textual units in the list comprise words, prefixes and suffixes, and (2) a memory that comprises a vocabulary of words, prefixes and suffixes and a plurality of speech samples with each speech sample corresponding to a one of the words, prefixes and suffixes, and since Oh fails to cure these deficiencies, the proposed combination with the Oh reference fails to establish a prima facie case of obviousness.

With respect to Claims 21-24, Applicant has amended independent Claims 21 and 23 to recite the parsing of the text file into one or more textual units, where each parsed textual unit is one of a word, prefix or suffix. For the same reasons set forth in the preceding paragraph, the proposed combination of references fails to disclose, teach or suggest the Applicant's claims (as amended).

c. Claims 14, 15, 19 and 20

The reasoning and argument accompanying the rejection of these claims appears similar to that provided with respect to Claims 1, 4-6 and 9-12 (see, Office Action, pp. 14-16). Therefore, Applicant reiterates its same arguments and reasoning, as set forth above in response to the rejection of those claims, and respectfully submits that the proposed Sharman-Hata-DIC-Malsheen combination fails to disclose, teach or suggest the Applicant's invention, as set forth

in Claims 1, 15, 19 and 20.

d. Remaining dependent Claims 7, 8 and 16-18 (103 rejections)

For the reasons set forth above in response to the Office Action's Section 103 rejections of Claims 1-6 and 9-12, as noted, the combinations of Sharman-Hata-DIC (Claims 1, 4-6 and 9-12) and Sharman-Hata-DIC-Oh (Claims 2-3) fail to disclose, teach or suggest all the elements/features of Applicant's invention (as claimed in those claims) and there is no motivation or suggestion to combine such references. Moreover, the additional secondary references cited in the proposed combinations of Sharman-Hata-DIC-R1 (Claim 7), Sharman-Hata-DIC-R1-O'Donnell (Claim 8), Sharman-Hata-DIC-R1-Oh (Claims 16, 18), and Sharman-Hata-DIC-R1-O'Donnell-Oh (Claim 17) fail to cure the noted deficiencies in Sharman, Hata and Oh. Therefore, none of the proposed combinations disclose, teach or suggest all the elements/features of Applicant's invention (as claimed) and there is no motivation or suggestion to combine such references.

Accordingly, the Applicant respectfully requests withdrawal of the § 103(a) rejections of Claims 1-12 and 14-24.

II. CONCLUSION

As a result of the foregoing, the Applicant asserts that the remaining Claims in the Application are in condition for allowance, and respectfully requests an early allowance of such Claims.

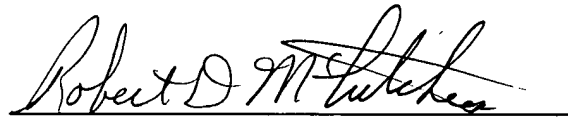
If any issues arise, or if the Examiner has any suggestions for expediting allowance of this Application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at *rmccutcheon@davismunck.com*.

The Commissioner is hereby authorized to charge any additional fees connected with this communication or credit any overpayment to Davis Munck Deposit Account No. 50-0208.

Respectfully submitted,

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Date: 3/16/2005



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